



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,376	03/01/2002	John B. Duffie III	112025-0488	3382
24267	7590	09/26/2005	EXAMINER	
CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			DAFTUAR, SAKET K	
			ART UNIT	PAPER NUMBER
			2151	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/087,376	Applicant(s) DUFFIE ET AL.	
	Examiner Saket K. Daftuar	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

PD

Response to Amendment

1. This action is responsive to the amendment filed on August 26th, 2005. Claims 1-22 are further presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Modi et al, U.S. Patent Number 6,587,866 B1 (hereinafter Modi).

As per claim 1, Modi discloses a cost associated with the packet, the cost representing a load associated with processing the packet [(see column 8, lines 4-5)]; determining an anticipated load for each coprocessor in the plurality of coprocessors using the cost [(see column 8, lines 4-5)]; and selecting the coprocessor from the plurality of coprocessors based on the anticipated load [(see column 2, lines 16-17)].

As per claim 2, Modi discloses calculating the cost using a rate associated with processing the packet [(see column 1, lines 38-39)].

As per claim 3, Modi discloses the rate is stored in a lookup table [(see column 9, lines 34-38)].

As per claims 4 and 5, Modi discloses dividing the packet's size by the rate [(see column 15, lines 39-41)]. Modi also discloses the step of multiplying the packet's size by a multiplicative inverse of the rate [(see column 15, lines 39-41, examiner considers multiplicative inverse of the rate as mathematical expression "rate inverse" which is same as packet size dividing by rate)].

As per claim 6, Modi discloses applying the packet's size to a lookup table containing one or more cost values to determine the cost. [(See column 11, lines 12-20)]

As per claim 7, Modi discloses adding the cost to a cumulative load associated with each coprocessor in the plurality of coprocessors [(see column 1, lines 60-65)].

As per claim 8, Modi discloses selecting the coprocessor from a group of one or more coprocessors whose anticipated load is a minimum load [(see column 12, lines 52-53)].

As per claim 9, Modi discloses the coprocessor is selected using a scheduling algorithm [(see column 14, lines 23-25)].

As per claim 10, Modi discloses that determining if a port associated with the packet is congested [(see column 10, lines 56-58)].

As per claim 11, Modi discloses that selecting the coprocessor from a group of one or more coprocessors whose anticipated load is not a minimum load [(see column 10, lines 53-61, examiner considers Bucket not having forwarding list for node as particular node forwarding list is full and it's waiting for a node to make it available)].

As per claim 12, claim 12 falls under the same limitation of claim 8. Therefore, claim 12 has been rejected under same rationale.

As per claims 13 and 14, Modi discloses of incrementing a cumulative load associated with the selected coprocessor [(see column 1, lines 60-65)]. Modi also discloses adding the cost to the cumulative load [(see column 1, lines 60-65)].

As per claims 15 and 16, Modi discloses decrementing a cumulative load associated with the selected coprocessor [(see column 12 lines 54-59)]. Additionally, Modi also discloses subtracting the cost from the cumulative load [examiner consider deletion of connection and deleting service on particular nodes as removing service weight from that node].

As per claim 17, Modi discloses a memory containing one or more software routines, including a software routine configured to determine a cost associated with the packet, the cost representing a load associated with processing the packet [(see column 2, lines 37-42)]; and a processor configured [(Server Node, see column 2, line 25)] to execute the software routines to determine an anticipated load for each coprocessor [(Nodes, see column 1, line 64)] in the plurality of coprocessors using the cost and to select the coprocessor from the plurality of coprocessors based on the anticipated load.

As per claim 18, Modi discloses a data structure [(see column 4, lines 41)]; wherein the cost is determined using information contained in the data structure [(see column 7, lines 40-44)].

As per claim 19, Modi also discloses that the information contained in the data structure includes the cost [(see column 7, lines 51-54)].

As per claim 20, Modi discloses that the information contained in the data structure includes a rate the coprocessor can process the packet [(see column 7, lines 19-20)].

As per claim 21, claim 21 is corresponding claim of claim 1. Therefore, claim 21 is rejected under same rationale.

As per claim 22, claim 22 is computer readable medium of method claim

1. They do not teach or further define over the limitations recited in claim 1.

Therefore, claim 22 is rejected for the same reasons set forth in claim 1, supra [(see column 21, line 15)].

Response to Arguments

4. Applicant's arguments filed August 26th, 2005 have been fully considered but they are not persuasive.

As per arguments filed on August 26th, 2005, the applicants' argue in substance that:

a. Modi is silent concerning applicant's claimed novel determining a cost associated with the packet, the cost representing a load associated with processing the packet; determining an anticipated load for each coprocessor in the plurality of coprocessors using the cost; and selecting the coprocessor from the plurality of coprocessors based on the anticipated load.

In response to applicant amended argument a), Modi discloses determining a cost associated with the packet, the cost representing a load associated (admitted by applicant) with processing the packet [(see column 8, lines 4-5, examiner consider weighted load as a load associated with processing the packet)]; determining an anticipated load for each coprocessor in the plurality of coprocessors using the cost [(see column 8, lines 4-5, examiner consider round robin load balancing policy inherits load balancing in plurality of coprocessor)];

Art Unit: 2151

and selecting the coprocessor from the plurality of coprocessors based on the anticipated load [(see column 2, lines 16-17 , examiner consider selecting a server node from the plurality of nodes (see column 2, lines 5-15) based on the round robin or weighted load (column 8, lines 4-5) as selecting the coprocessor from the plurality of coprocessors based on the anticipated load)].

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See accompanying P.T.O 892.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Saket K. Daftuar** whose telephone number is **571-272-8363**. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Zarni Maung** can be reached on **571-272-3939**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKD
September 22, 2005


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER